

## A NEW DRAGONFLY FROM VIRGINIA.

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The dragonfly *Neurocordulia obsoleta* Say (*polysticta* Burmeister), is crepuscular in habit, and usually a rare insect. It has been reported from Maine and Massachusetts, as far west as Illinois, and as far south as Louisiana. *Neurocordulia yamaskanensis* Provancher is also recorded as uncommon, and if anything more crepuscular in habit than *obsoleta*. It is recorded from Maine, the Province of Quebec, and also occurs in Ontario, as is stated by Prof. E. M. Walker.

The writer has collected but three specimens of *obsoleta* though others have been examined. They are usually disturbed in some situation where they have been at rest. He has also in his collection a female *Neurocordulia* collected close to the James River in Buckingham County, Virginia, June 21, 1919. It was found in the partly forested country while collecting insects with Col. Wirt Robinson. This specimen has been shown to a number of specialists in Odonata, and compared with all the specimens of *obsoleta* available. It differs in a number of important characters, and is no doubt a representative of a rare and undescribed species of *Neurocordulia*, which like *obsoleta* and *yamaskanensis* is also crepuscular in habit. It was hoped that additional specimens might be collected, but while the writer, through the kindness of Colonel Robinson, has since visited the locality, it has been in August, and possibly too late for the *Neurocordulia*. On July 6, 1919, a very old female *obsoleta* with clouded wings was collected at Wingina, Va., on the opposite side of the James River from Buckingham County.

In *Psyche*, July, 1890, Dr. Hagen gives descriptions and illustrations of both *obsoleta* and *yamaskanensis*, and in Howe's *Manual of the Odonata of New England*, there are also figures of appendages. In *Entomological News*, November, 1908, Plate 18, Mr. E. B. Williamson figures the wings of *yamaskanensis*, as well as those of the allied *Platycordulia xanthosoma* Williamson. While the Virginia specimen resembles *xanthosoma* in some respects, it is a true *Neurocordulia*, having the anal loop separated from the wing margin by one row of cells, and not by two, as in *Platycordulia*. The shape of the anal loop is also the same as in *Neurocordulia*.

***Neurocordulia virginiensis* n. sp.**

Type, female. Buckingham County, Virginia, June 21, 1919.  
Davis collection.

Of the same size as *obsoleta*, but with the wings not as densely reticulate, and the pterostigma shorter with its front and hind margins not as parallel. No cross-veins in the median (basilar) space behind the arculus, whereas in *obsoleta* there is a cross-vein in this space in both fore and hind wings in all the specimens so far examined. In having no cross-vein in the basilar space, it resembles *yamaskanensis* but it lacks the numerous cross-veins and spaces beyond the pterostigma in both the fore and hind wings present in *yamaskanensis* and *obsoleta*. *Virginiensis* also lacks the third row of cells below  $Cu_2$  in the fore wings, present in both the other species of the genus. Other differences in venation may be seen by comparing the figure of the female from Cabin John, Maryland, June 10, 1910, with the type.

The abdominal appendages are pale brown, darker at tips, and shaped as in *obsoleta*, but shorter. They are about twice as long as the last segment, whereas in *obsoleta* they are plainly more than twice as long. The vulva notch (see figure) is differently shaped and broader than in either *obsoleta* or *yamaskanensis* as figured both by Hagen and Howe.

The general color of *virginiensis*, taken from the more or less faded type, is yellowish brown, with the front, mouth parts, legs except the tarsi and spines which are black, pale greenish yellow. The membranula are as in *obsoleta*, white at basal half with the apical portion blackish. Both the fore and hind wings are almost devoid of spots, the pale yellow ones showing much more plainly in the photograph than in the specimen itself.

Measurements in millimeters: Female type: Total length with appendages, 49 mm.; width of head across eyes, 8 mm.; length of abdomen, 36 mm.; length of front wing, 34 mm.; length of front tibia, 4.5 mm.; length of hind femur, 6 mm.

## EXPLANATION OF PLATE X.

- Fig. 1. *Neurocordulia obsoleta* Say, Wingina, Va., July, 1919.  
Fig. 2. *Neurocordulia obsoleta* Say, Cabin John, Md., June, 1910.  
Fig. 3. *Neurocordulia virginiensis* Davis, Type, Buckingham Co., Va.  
Fig. 4. *Neurocordulia virginiensis*, vulva opening.

